

Manifestations of MPS that may affect respiratory function¹

Manifestations	% of patients (N=21)
Airway narrowing	
Hypertrophy of tonsils/adenoids	67
Macroglossia	57
Nasopharyngeal obstruction	86
Supraglottic narrowing	92
Infraglottic narrowing	62
Pulmonary disease	
Obstructive defect	71
Focal atelectasis	35
Recurrent pneumonia	40
Interstitial markings	24
Arterial hypoxemia awake	57
Arterial hypoxemia asleep	100
Sleep apnea	
Central	0
Obstructive	89
Thoracolumbar spine deformity	
Scoliosis	67
Thoracic hyperkyphosis	62
Lumbar hyperlordosis	38
Thoracolumbar gibbus	57
Cervical spine involvement	
Cervical spine subluxation	68
Odontoid hypoplasia	69
Cord compression	63

Adapted from Berger, *J Inherit Metab Dis*, 2013.

Abbreviation: MPS, mucopolysaccharidoses.

Reference: 1. Berger KI, Fagondes SC, Giugliani R, et al. Respiratory and sleep disorders in mucopolysaccharidosis. *J Inherit Metab Dis*. 2013;36(2):201-210. doi:10.1007/s10545-012-9555-1.